CLAIMS

1. An unheated-curable binder composition comprising as its main components a trifunctional or tetrafunctional phenol bearing one or two electron donating groups on the benzene ring of the phenol, a crosslinking agent, and a catalyst.

2. An unheated-curable binder composition according to Claim 1, wherein the trifunctional or tetrafunctional phenol is at least one member selected from the group consisting of 1,2-dihydroxybenzene, 1,3-dihydroxybenzene (resorcinol), 1,3,5-trihydroxybenzene, *meta*-cresol, and 3,5-dimethylphenol.

3. An unheated-curable binder composition according to Claim 1 or 2, wherein the crosslinking agent is at least one aldehyde selected from the group consisting of formaldehyde, acetaldehyde, benzaldehyde, paraformaldehyde, trioxane, phthalaldehyde, isophthalaldehyde and terephthalaldehyde, and/or at least one xylene glycol selected from the group consisting of *ortho*-xylene glycol, *para*-xylene glycol, *meta*-xylene glycol, 1,3,5-trimethylolbenzene, 1,2,4-trimethylolbenzene, and 1,2,3-trimethylolbenzene.

4. An unheated-curable binder composition according to any one of Claims 1, 2 and 3, wherein the catalyst is an acid catalyst or base catalyst.

5. An unheated-curable binder composition according to Claim 4, wherein the acid catalyst is an inorganic acid catalyst or organic acid catalyst.

6. An unheated-curable binder composition according to Claim 4, wherein the base catalyst is an inorganic base catalyst or organic base catalyst.

7. An unheated-curable binder composition according to Claim 5, containing 0.2 to 2.0 moles of crosslinking agent and 0.005 to 0.3 moles of acid catalyst per mole of trifunctional or tetrafunctional phenol.

8. An unheated-curable binder composition according to Claim 6, containing 0.2 to 2.0 moles of crosslinking agent and 10^{-5} to 0.3 moles of base catalyst per mole of the trifunctional or tetrafunctional phenol.

9. An unheated-curable binder kit containing a first liquid comprising a solvent and a trifunctional or tetrafunctional phenol bearing one or two electron donating groups on the benzene ring of the phenol, together with a second liquid comprising a cross-linking agent, a catalyst and a solvent.

10. An unheated-curable binder kit containiig a first liquid comprising a solvent, a catalyst and a trifunctional or tetrafunctional phenol bearing one or two electron donating groups on the benzene ring of the phenol, together with a second liquid comprising a cross-linking agent and a solvent.

11. A method for manufacturing a phenolic resin molded article, wherein a mixture comprising a base material, the unheated-curable binder composition according to any one of Claims 1 through 8, and solvent as necessary, is molded and set under unheated conditions.

12. A manufacturing method according to Claim 11, wherein the resulting set article is thereafter baked.

13. A manufacturing method according to Claim 13, wherein the base material is at least one member selected from the group consisting of ceramics, carbon, natural minerals, glass,

metal, wood splinter, pulpwood, waste cotton, cloth scraps and paper.

14. A phenolic resin molded article obtainable by the manufacturing method according to any one of Claims 11 through 13.

15. A method for manufacturing a sand mold for casting comprising the steps of:
(A) mixing molding sand, a solvent, and the unheated-curable binder composition according to any one of Claims 1 through 8, and
(B) casting the resulting mixture into a molding form and molding and setting it under unheated conditions.

16. A sand mold for casting obtainable by the manufacturing method according to Claim 15.

17. A method for manufacturing a porous ceramic molded article comprising the steps of:
(C) mixing a ceramic powder, a surfactant, a solvent, a phosphate and the unheated-curable binder composition according to any one of Claims 1 through 8,
(D) casting the resulting mixture into a molding form and molding and setting it under unheated conditions, and
(E) baking the resulting set article at 600 to 1900°C.

18. A porous ceramic molded article obtainable by the manufacturing method according to Claim 18.

19. A method for manufacturing a ceramic molded article comprising the steps of:
(F) mixing a ceramic powder, a phosphate (or hydrate thereof) and the unheated-curable binder composition according to any one of Claims 1 through 8,

(G) casting the resulting mixture into a molding form and molding and setting it under unheated conditions, and
(H) baking the resulting set article at 600 to 1900°C.

20. A ceramic molded article obtainable by the manufacturing method according to Claim 19.

21. A method for manufacturing a sagger comprising the steps of:
(I) mixing sintered or fused magnesia or fused or sintered spinel, a non-aqueous solvent and the unheated-curable binder composition according to any one of Claims 1 through 8,
(J) casting the resulting mixture into a sagger form and molding and setting it under unheated conditions, and
(K) baking the resulting set article at 600 to 1900°C.

22. A manufacturing method according to Claim 21, wherein the molding method is slip casting.

23. A method for manufacturing a carbon/carbon composite material, wherein a mixture comprising a solvent and the unheated-curable binder composition according to any one of Claims 1 through 8 is brought into contact with carbon fibers to form a coating, the coating is then set under unheated conditions, and the resulting set coating is then baked.

24. A carbon/carbon composite material obtainable by the manufacturing method according to Claim 23, wherein the final carbon content of the resin is at least 60%.